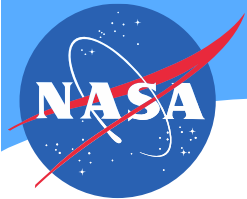




NASA RDAC Report to the GHR SST Science Team

Edward Armstrong, Jorge Vazquez, Wen-Hao Li, Toshio Chin, and Zhijin Li,
19th GHR SST Science Team Meeting
Darmstadt, Germany
4 June 2018



National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

© 2018 California Institute of Technology.
Government sponsorship acknowledged.



NASA RDACs

- * Current components

- * **JPL RDAC**

- * MODIS Aqua and Terra L2P
 - * VIIRS L2P
 - * MUR L4

- * **JPL_OUROCEAN RDAC**

- * G1SST L4



MODIS and VIIRS L2P

- * Aqua and Terra L2P v2014.0
 - * https://podaac.jpl.nasa.gov/dataset/MODIS_T-JPL-L2P-v2014.0
 - * Used as input layer in SOTO visualization
- * VIIRS L2P v2016.0
 - * https://podaac.jpl.nasa.gov/dataset/VIIRS_NPP-JPL-L2P-v2016.0
 - * 2012-2018 time series completed March 2018
- * Operations nominal. Data within 3-4 hours of observation



G1SST

- * G1SST status
 - * G1SST to keep producing global maps on the daily basis
 - * The G1SST 2DVAR blending algorithm has been revised for blending L2 VIIRS SSTs, with emphasis on keeping small-scale features resolved by VIIRS.



MUR L4

- * MUR improvements

- * Experimental field "dt_1km_data" introduced to indicate temporal proximity to MODIS (and VIIRS) L2P samples at each grid
 - * Enables MUR L4 to be use as a L3C
 - * Included in MUR product since mid-2016
- * Smoothness optimization (given the L2P sampling patterns and timing) using simulated SST dynamics (from 2km global ECCO2 runs)
 - * Any community interest in such a simulated SST data set?
- * 25-km grid MUR product
 - * A by-product of the full MUR production line.
 - * Part of COVERAGE project (see Vazquez posters).



COVERAGE

(CEOS Ocean Variables Enabling Research and Applications for GEO)

- Collaborative effort within CEOS and 3-year NASA project
 - Involves the 4 Ocean VCs (SST, OST, OCR, OSVW) and GEO projects (MBON, Blue Planet) to enable more widespread use of ocean satellite data in support of applications.
 - Initial Phase focused on creating common 25km global gridded products of 4 Ocean VCs.
 - Platform for improved, integrated ocean data access utilizing emerging data management and cloud capabilities
 - See poster by J. Vazquez et al.

NASA Physical Oceanography



- * Recent SST initiatives and proposals
 - * National Ocean Partnership Program (NOPP) MISST follow on. PI Chelle Gentemann
 - * Artic SST emphasized
- * ROSES Physical Oceanography 2017. Three awards.
 - * Prabhat Koner (Univ. of Maryland)
 - * Physical Deterministic SST from MODIS and VIIRS Radiances
 - * Peter Minnett (Univ. of Miami)
 - * Merging Optimal Estimation and Multi-Channel Atmospheric Corrections for Accurate SSTs from MODIS and VIIRS
 - * Frank Wentz (Remote Sensing System)
 - * Improved Air-SE Essential Climate Variables from Aqua AMSR-E and VIIRS